REMARKS

OVERVIEW

Claims 1-17 are currently pending in this application. Claims 1 and 9 have been amended. Claim 17 is a new independent claim that adds no new material. The present response is an earnest effort to traverse all rejections and secure the Examiner's agreement that all claims are in proper form for immediate allowance. Therefore, proper reconsideration and passage to issuance is respectfully requested.

FORMALITY ISSUES

Claims 1 and 9 have been rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Specifically, the Examiner has rejected claims 1 and 9 for having insufficient antecedent basis for the element "the lag". Claims 1 and 9 have been amended to reflect proper antecedent basis. It is now believed that claims 1 and 9 are in proper form. Applicant respectfully asks that these rejections be withdrawn in light of the aforementioned amendment.

ISSUES UNDER 35 U.S.C. § 103(a)

Claims 1-5, 7-10, 12-13 and 15-16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,901,300 to Blevins in view of U.S. Patent No. 4,823,299 to Chang. Claims 6, 11 and 14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Blevins in view of Chang and in further view of U.S. Patent No. 4,349,869 to Prett. The Applicant respectfully traverses these rejections.

The Examiner has failed to establish a *prima facie* case of obviousness and thus the rejections of the claims should be withdrawn. "Mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole." In re Leonard R. Kahn, 441 F.3d 977, 986 (Fed. Cir. 2006). "Rather, to establish a *prima facie* case

of obviousness based on a combination of elements disclosed in the prior art, the [Examiner] must articulate the basis on which [she] concludes that it would have been obvious to make the claimed invention." Id. "In practice, this requires that the [Examiner] explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious." Id. The Federal Circuit further stated in Kahn that "when the [Examiner] does not explain the motivation, or the suggestion or teaching, that would have lead the skilled artisan at the time of the invention to the claimed combination as a whole, we infer that the [Examiner] used hindsight to conclude that the invention was obvious." Id.

As stated in John Deere Co., 383 U.S.1 (1966) by the United States Supreme Court, there is a need to avoid using hindsight and to resist the temptation to read into the prior art the teachings of the invention at issue. The Examiner has impermissibly made conclusionary statements that it would have been obvious to a person of ordinary skill in the art to modify the prior art references without explaining what the motivation, suggestion or teaching would be to combine the references. Because the Examiner has failed to state the motivation or teaching, the Applicant respectfully requests that the rejections of claims 1-16 be withdrawn as the Examiner is impermissibly using hindsight to reject the claims.

Independent claim 1 is also not obvious in light of the teachings of Blevins and Chang. Claim 1 requires "arranging the filtered data in matrices with one column for each variable signal". Blevins does not teach this. Instead, Blevins teaches of a matrix of input/output curves, also known as response curves. The response curve is a two-dimensional function relating an output with an input. In the present invention, the matrix is formed using actual variables, and not the coefficients of response curves.

Additionally, claim 1 requires "determining the goodness of fit of each lag function based on the most recent filtered data." Blevins does not teach this. Blevins teaches of filtering the data by rejecting outlying points. The method of the present invention instead tests the estimator (the function relating lag to variables) for goodness of fit. This is different than the data screening method of Blevins which removes outliers. Blevins teaches filtering or screening data

to eliminate data points. The present method automatically discards constructed lag functions which failed a certain goodness fit criterion.

As has been shown, Blevins does not disclose each of the elements of claim 1. The inclusion of Chang and/or Prett does not rectify this failure to disclose each limitation. As each element of claim 1 is not disclosed by the teachings of Blevins, Chang and/or Prett, the Applicants ask that the rejection of claim 1 be withdrawn. As claims 2-8 depend from claim 1, these rejections should also be withdrawn.

Independent claims 9 and 12 also require that "arranging the data in matrices with one column for each variable signal". As previously discussed with regard to claim 1, this limitation is not taught by the combination of prior art relied upon by the Examiner. As such, the rejections of claims 9 and 12 should be withdrawn. As claims 10-11 and 13-16 depend from claims 9 and 12 respectively, the Applicant asks that these rejections be withdrawn as well.

NON-ANALAGOUS ART

The Applicant would also ask that the rejections be withdrawn as Chang is non-analogous art. "In order to rely on a reference as a basis for rejection for an applicant's invention, the reference must be in the field of the Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." See MPEP § 2141.01. Chang is non-analogous art to both Applicant's invention and the Blevins reference because Chang teaches a signal processing algorithm while Blevins and the present invention teach different continuous process control systems. Moreover, the combination of Chang and Blevins is also improper. Chang is in the signal processing field and Blevins is in the advanced process control field. Even the U.S. classifications of the inventions are different (Applicant's invention's U.S. classification is 700/42, Blevins' U.S. classification is 700/42, while Chang's is 364/735). Because the combination of the two prior art references is non-analogous, the Applicants ask that the rejections based upon the combination of Blevins and Chang be withdrawn.

NEW CLAIM

Claim 17 is a new claim. Claim 17 includes the non-disclosed limitation that the filtered data be arranged in matrices with one column for each variable signal as discussed previously. The Applicant respectfully asks that claim 17 be allowed.
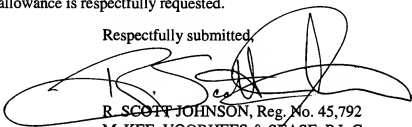

CONCLUSION

It is respectfully submitted that all claims are in proper form for allowance.

Please charge Deposit Account No. 26-0084 the amount of $100.00 for one new independent claim over 3. No other fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,

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